



- *High torsional stiffness*
- *0.1% accuracy*
- *700 ohm bridge*
- *Capacities from 50 to 1000 oz-in*
- *SAE 2024-T351 aluminum*
- *Supplied with mating connector*

The T114 is designed for measuring small values of torque found in miniature motors, pumps, compressors, turbines, fans, and other fractional horsepower rated devices, very small torque values associated with the measurement of viscosity, and losses caused by bearing friction. The T114 can be installed at either the driver or absorber end of the measurement chain and thus is able to measure the net available torque being delivered to the device under test. AC carrier or DC strain gage signal conditioning electronics can be used with the T114. Interconnecting cable assemblies are available as an option. In-house calibration of the T114 with SensorData electronics will be provided free of charge or with customer-supplied electronics for a fee.

### Specifications

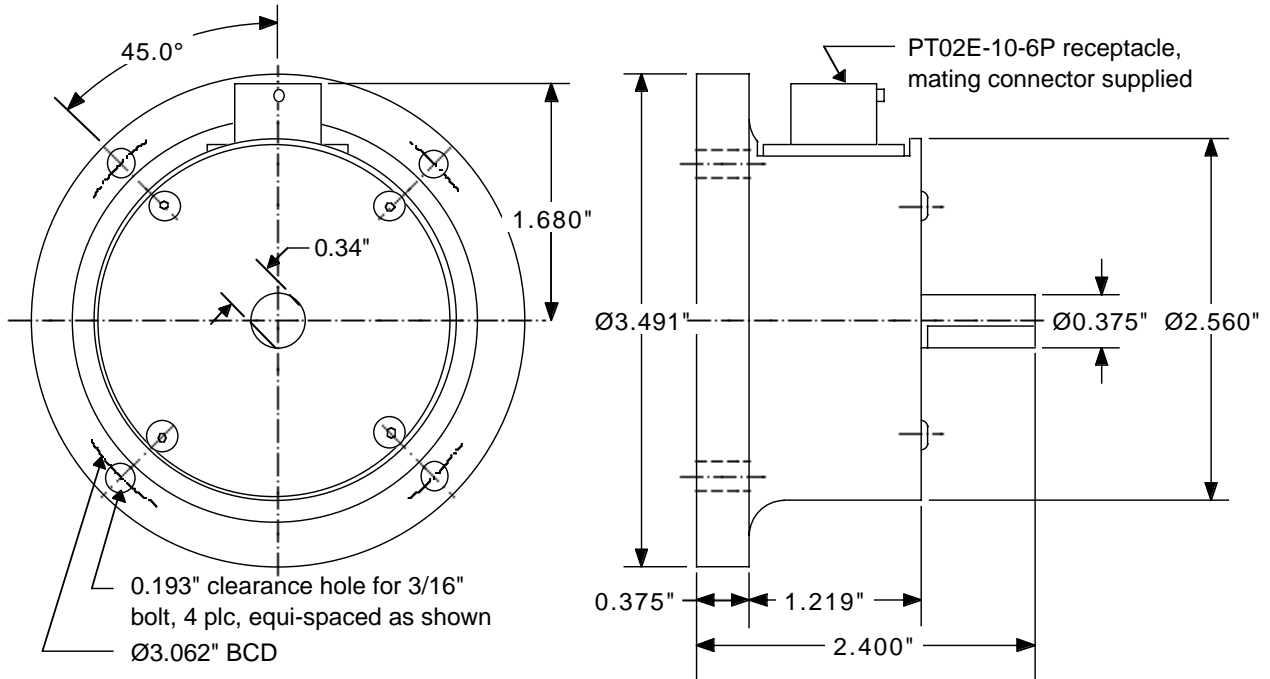
(Subject to change without notice)

Rated Capacity	50, 100, 200, 500, 1K oz-in
Nonlinearity	0.10% of rated output
Hysteresis	0.10% of rated output
Nonrepeatability	0.05% of rated output
Rated Output, typical	2.00 mV/V
Zero Balance	+/-1% of rated output
Temperature Range, operating	-65 to +200 F
Temperature Range, compensated	+70 to +170 F
Temperature Effect on Output	0.002% of load/F
Temperature Effect on Zero	0.002% of rated output/F
Bridge Resistance, typical	700 ohms
Excitation Voltage, bridge, typical	10 VDC or VAC rms
Excitation Voltage, bridge, maximum <sup>(1)</sup>	20 VDC or VAC rms
Insulation Resistance, bridge to case	>5000 megohms at 50 VDC
Maximum Load, safe <sup>(2)</sup>	150% of rated capacity
Maximum Load, ultimate <sup>(3)</sup>	300% of rated capacity
Torsional Stiffness, typical	See table next page
Extraneous Loads, maximum	See table next page
Number of Bridges	1 (2 optional - consult factory)
Weight	1.5 lbs
Construction	SAE 2024-T351 Aluminum

<sup>(1)</sup> Temperature gradients caused by higher excitation voltages may effect performance.

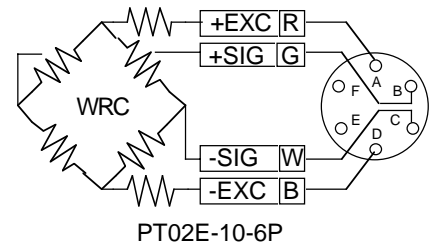
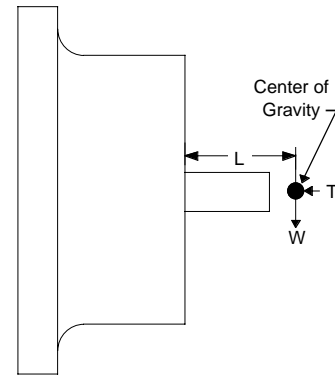
<sup>(2)</sup> With load centered maximum torque that can be applied without producing a permanent shift in performance characteristics.

<sup>(3)</sup> With load centered maximum torque that can be applied without physical damage.



Rated Capacity oz-in	Torsional Stiffness oz-in/rad	Maximum Overhung Moment W X L oz-in	Maximum Shear W oz	Maximum Thrust T oz
50	27,000	190	320	700
100	27,000	190	320	700
200	74,000	250	400	1,050
500	126,000	300	490	2,000
1K	290,000	500	610	2,800

Do not exceed the maximum value for overhung moment or shear, whichever occurs first.



**ORDERING INFORMATION**

T114-Capacity  
Cable Assembly  
Cable Assembly

Standard; supplied with receptacle and mating connector. Mounting hardware not included.  
Optional; 10 ft., color coded, shielded, mating connector sensor end, customer specified connector instrument end.  
Optional; 10 ft., color coded, shielded, mating connector sensor end, leads stripped and tinned instrument end.

**IMPORTANT NOTICE**

Dimensions above are in inches unless otherwise noted. Manufacturer not responsible for any modification to product, fixtures, or accessories made by user or third party. User should request certified drawings before designing mountings or fixtures. Manufacturer reserves right to modify or change design, dimensions, specifications, and features of this product without prior written notice. Changes to NOTICE must be in writing and accepted by manufacturer.

**SensorData Technologies, Inc.**, 43626 Utica Road, Sterling Heights, MI 48314

Ph: (586) 739-4254 - Fax: (586) 739-5689 - E-mail: sensdata@aol.com -Web: www.sensordata.com